

PTO/SB/08A (10-01)

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet **1** of **3****Complete if Known**

Application Number	09/848,966
Filing Date	May 4, 2001
First Named Inventor	Richard L. Cunningham
Art Unit	2673
Examiner Name	Nitin Patel
Attorney Docket Number	IMMR028/00US

U.S. PATENT DOCUMENTS					
Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		6,422,941	7/23/2002	Thorne et al.	
		6,160,489	12/12/2000	Perry et al.	
		6,111,577	8/29/2000	Zilles et al.	
		5,690,582	11/25/1997	Ulrich et al.	
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		5,283,970	2/8/1994	Aigner	
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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	H2-185278		7/19/1990	Taito Corporation	—
		JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	—
		JP	H7-24147		1/27/1995	Sega Corporation	—
		JP	H5-192449		8/3/1993	Taito Corporation	—

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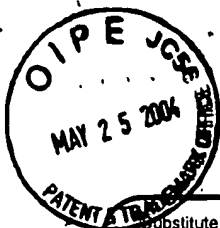
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Kind Codes of U.S. Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Sheet **2** of **3****Complete if Known**

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**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.
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		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
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		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 <sup>nd</sup> Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.
		LAKE, "Cyberman from Logitech," at <a href="http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html">http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html</a> , 1994.
		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part no. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).

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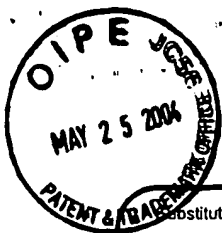
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		Filing Date	May 4, 2001
		First Named Inventor	Richard L. Cunningham
		Art Unit	2673
		Examiner Name	Nitin Patel
Sheet 3 of 3	Attorney Docket Number	IMMR028/00US	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part no. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).	
		SCANNELL, "Taking a Joystick Ride," <i>Computer Currents</i> , Boston Edition, Vol. 9, No. 11, November 1994	
MLP		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992	
		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue.	
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.	

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Substitute for form 1449A/PTO		<b>Complete If Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	09/848,966
		Filing Date	May 4, 2001
		First Named Inventor	Richard L. Cunningham
		Art Unit	2673
		Examiner Name	Nitin Patel
Sheet 1 of 6	Attorney Docket Number	IMMR028/00US	

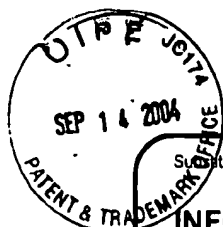
**U.S. Patents or Published Patent Applications**

Examiner Initial	Patent No.	Date	Patentee	Class	Sub-Class	Filing Date
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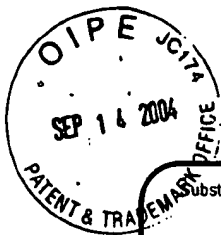
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Sheet	2	of	6

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		Examiner Name	Nitin Patel
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Sheet	3	of	6

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*(use as many sheets as necessary)*

Sheet	4	of	6
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Sheet	5	of	6

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Examiner Initial	Author, Title, Date, Place (e.g. Journal) of Publication
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	Hasser, C. et al., "Tactile Feedback With Adaptive Controller for a Force-Reflecting Haptic Display--Part 1: Design," IEEE 0-7803-3131, Jan. 1996.
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	Akamatsu, M. et al., "Multimodal Mouse: A Mouse-Type Device With Tactile and Force Display," Presence, vol. 3, No. 4, Winter 1994, pp. 73-80.
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Form PTO 1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark OfficesAtty. Docket No.  
IMMR-IMMD008  
(034701-059)Serial No.  
09/848,966

Information Disclosure Statement by Applicant

Applicant:  
Richard L. CUNNINGHAM

(Use several sheets if necessary)

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05/04/2001Group:  
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## U.S. Patent Documents

Init.	Document No.	Date	Name	Class	Subclass	Date
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	3520060	07/14/1970	Crabtree et al.			07/01/1969
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## Translation

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	H2-185278	07/19/90	Japan			X	
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Examiner

Date Considered

4-13-06

Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.

Form PTO 1449 (Rev. 2-32) U.S. Department of Commerce Patent and Trademark Offices				Atty. Docket No. IMMR-IMD0008 (034701-059)		Serial No. 09/848,966		
Information Disclosure Statement by Applicant				Applicant: Richard L. CUNNINGHAM				
(Use several sheets if necessary)				Filed: 05/04/2001		Group: 2673		
<b>U.S. Patent Documents</b>								
Init.		Document No.	Date	Name	Class	Subclass	Date	
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							Translation	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
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		H7-24147	01/27/95	Japan			X	
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Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.								

Form PTO 1449 (Rev. 2-32)      U.S. Department of Commerce Patent and Trademark Offices				Atty. Docket No. CAP-001 (036310-002)		Serial No. <del>10/925,330</del> <b>09/848,966</b>	
<b>Information Disclosure Statement by Applicant</b>				Applicant: Pengcheng Jia			
(Use several sheets if necessary)				Filed: 8/23/2004		Group: 2817	
<b>U.S. Patent Documents</b>							
Init.	Document No.	Date	Name	Class	Subclass	Date	
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<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
Examiner <b>NLP</b>				Date Considered <b>4-13-06</b>			
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Form PTO 1449 (Rev. 2-32)      U.S. Department of Commerce Patent and Trademark Offices				Atty. Docket No. IMMR-IMMD008 (034701-059)		Serial No. 09/848,966		
<b>Information Disclosure Statement by Applicant</b>				Applicant: Richard L. CUNNINGHAM				
(Use several sheets if necessary)				Filed: 05/04/2001		Group: 2673		
<b>U.S. Patent Documents</b>								
Init.		Document No.	Date	Name	Class	Subclass	Date	
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							<b>Translation</b>	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>								
Examiner <i>MB</i>					Date Considered <i>4-13-06</i>			
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Form PTO 1449 (Rev. 2-32)      U.S. Department of Commerce Patent and Trademark Offices				Atty. Docket No. IMMR-IMMD008 (034701-059)		Serial No. 09/848,966		
<b>Information Disclosure Statement by Applicant</b>				Applicant: Richard L. CUNNINGHAM				
(Use several sheets if necessary)				Filed: 05/04/2001		Group: 2673		
<b>U.S. Patent Documents</b>								
Init.		Document No.	Date	Name	Class	Subclass	Date	
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<b>Foreign Documents</b>								
							<b>Translation</b>	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>								
Examiner <i>NLS</i>					Date Considered <i>4-13-06</i>			
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.								

Form PTO 1449 (Rev. 2-32)      U.S. Department of Commerce Patent and Trademark Offices				Atty. Docket No. IMMR-IMMD008 (034701-059)		Serial No. 09/848,966		
<b>Information Disclosure Statement by Applicant</b>				Applicant: Richard L. CUNNINGHAM				
(Use several sheets if necessary)				Filed: 05/04/2001		Group: 2673		
<b>U.S. Patent Documents</b>								
Init.		Document No.	Date	Name	Class	Subclass	Date	
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<b>Foreign Documents</b>								
							<b>Translation</b>	
Init.		Document No.	Date	Country	Class	Subclass	Yes	No
<b>Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)</b>								
Examiner <i>NLF</i>					Date Considered <i>4-13-06</i>			
Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.								



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